

REMARKS/ARGUMENTS

Applicant has amended the specification to include a paragraph claiming priority to the parent application. Paragraph [0017] has been amended to include the subject matter of originally filed Claims 9, 14 and 18.

Claims 1-29 now stand before the Examiner. Claims 1, 2, 5, 8, 11, 15, 17 and 18 have been amended. New Claims 21-29 have been added.

Applicant submits that the amendments to the specification and claims adds no new matter.

The Examiner's rejections found in the Final Office Action mailed 11/25/2003 (Paper No. 8) in the parent application, U.S. Serial No. 09/990,640, will be addressed herein where applicable.

The Examiner has rejected Claims 23 and 24 (same numbering in the present application as the parent) under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner also rejected Claims 1, 13, 18, 48 and 50 under 35 U.S.C. §102(e) as being anticipated by Skoog et al. (U.S. 6,210,791). The Examiner has further rejected Claims 19, 20, 46 and 47 under 35 U.S.C. §103(a) as being unpatentable over Skoog et al. in view of Li et al. (U.S. 6,582,779).

35 U.S.C. §112, Second Paragraph

The Examiner has rejected Claims 23 and 24 under 35 U.S.C. §112, second paragraph as being indefinite. Specifically, Claim 23 includes tantalum oxide and La_2O_3 and may further include an oxide of La. The Examiner

believes it is not clear whether the Applicant intended to include more than 10 mol% of La.

The protective coating includes Ta₂O₅ and La₂O₃, wherein the La₂O₃ is from about 1-10 mol%. The protective coating "*further* includes an oxide, compound, or precursor thereof, of an element chosen from the group consisting of Al, Hf, Si, Ln (rare earth including whole lanthanum series and yttrium), Mg, Mo, Ni, Nb, Sr, and Ti." (italics added for emphasis). By adding the limitation to the amount of La₂O₃ before the phrase "further including", Applicant has made it clear that the range limitation of about 1-10 mol% does not apply to any further included oxides, compounds or precursors, even additional La₂O₃. Applicant thus submits that Claim 23, as written is definite and requests withdrawal of the rejection.

Skoog, et al. (US 6, 210,791)

The Skoog reference discloses coating a metal or ceramic substrate with a diffuse reflective barrier coating and a low-emissivity top coat covering the diffuse reflective barrier coating. (Abstract, lines 1-5). The coating method disclosed in the Skoog reference requires a smooth surface of the diffuse reflective barrier coating. (col. 3, lines 28-44; col. 6, lines 60-64).

The Skoog reference mentioned 1-40 wt% concentration for other particles including tantalum oxide in the coating (col. 8, lines 58-61). Assuming that the balance is 60 wt% aluminum oxide, for a coating with 40 wt% tantalum oxide, the molar ratio of tantalum oxide to aluminum oxide would be 13.3 mol%: 86.7 mol%. This indicates that tantalum oxide, at 13.3 mol%, is a minor ingredient of the coating of the Skoog reference, and the coating composition is much different from the composition of the coating of the present invention. In contrast, the coating of the present invention has greater than 40 mol% of

tantalum oxide, distinguishing it from the coating of the Skoog reference. Applicant has amended Claims 1, 11 and 15 (corresponding to Claims 1, 13 and 18 in the parent application) to have tantalum oxide present at about greater than 40 mol%. Basis for these amendments can be found in the specification and originally filed claims, particularly paragraph [0014] on page 4 and original Claims 11-13. New Claim 25 is also directed toward a component with a protective coating having greater than about 40 mol% of tantalum oxide and therefore is also distinguished from the Skoog reference.

Applicant thus submits that the Skoog reference, with tantalum oxide at no more than 13.3 mol%, does not disclose, teach or suggest the coating of amended Claims 1, 11 and 15 wherein tantalum oxide is a major component present at greater than about 40 mol%. Withdrawal of the rejection is therefore respectfully requested.

Li, et al. (US 6, 582,779)

The Li reference discloses a turbomachine component with a silicon nitride substrate with a multi-layer coating bonded to the substrate. The outer surface of the substrate may be roughened. (col. 5, lines 10-11).

Applicant submits that neither the Skoog reference nor the Li reference, either alone or taken together, teach or suggest the method of coating a component with the protective coating of the present invention. Specifically, neither reference teaches or suggests a protective coating having greater than about 40 mol% of tantalum oxide. Applicant therefore respectfully requests withdrawal of the rejection.

New Claims

New Claims 21 and 22 find support in Examples 1 and 3. New Claims 23 and 24 find support in originally filed claims 2-7. Claims 23 and 24 were originally presented in the parent application.

New independent Claim 25 and its new dependent Claims 26-29 find support in Example 1, in paragraph [0021] on page 6 of the originally filed specification. Applicant submits that these claims are allowable as the prior art does not teach or render obvious the subject matter of Claims 25-29.

CONCLUSION

Applicant submits that the claims now stand ready for allowance and such allowance is courteously solicited.

In the event the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

Respectfully submitted,

By:



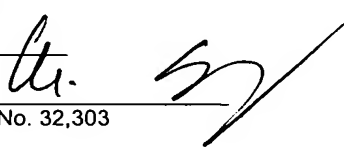
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